



switches 25, 26 are part of or at least connected to the power switch because the power switch is activated by these momentary on/off switches. Beigel's Abstract states:

...the power switch employs momentary ON/OFF switches for activating the power switch, and wherein additional circuit means is provided to preserve the ON/OFF condition or state of the power switch during a power-down situation such that upon restoration of the AC power the power switch can be caused to assume the same ON or OFF state it was in just prior to the power-down situation.

Therefore, because the on/off switches 25, 26 (and thereby, the power switch) are coupled to the logic section (microcomputer) via the buffers and ESD circuitry, if the logic section hangs up, the on/off switches 25, 26, and therefore, the power switch will become inoperable. Note that Beigel's invention is designed to retain the power switch state when there is a power loss, not when the logic section hangs up. Thus, Beigel's invention suffers from the same problem as the conventional power on/off circuit apparatus.

In general, in a conventional power on/off circuit apparatus such as Beigel's, a power switch is provided, for example, on a key matrix of a logic circuit. Therefore, if the logic circuit hangs up, the power switch becomes inoperable. The way to reset the apparatus was to execute a hard shutdown such as unplugging the power cord and then plugging the power cord back into the socket to reboot the apparatus.

In contrast, in the present invention as set forth in claim 1, a reset circuit and a power switch are connected to a reset terminal of a microcomputer. At least, this configuration is not disclosed, taught, or suggested by Beigel. By having the power switch connected to the reset terminal of the microcomputer, the microcomputer can be reset through the reset circuit without executing a hard shutdown such as unplugging and plugging the power cord (see page 7, lines 5 to 8).

Claim 1 is not anticipated by Beigel for at least the above reason. Claims 2 and 4 that depend from claim 1 are not anticipated for at least the same reason as claim 1. Claim 4 has been incorporated into new claim 12 and canceled.

Claim Rejection – 35 USC §103

Claims 3 and 5-8 have been rejected under 35 USC §103(a) as being unpatentable over US Patent to Beigel in view of US Patent. 6,625,739 to Kobayashi.

Similar to Beigel, Kobayashi also does not disclose, teach, or suggest a reset circuit and a power switch connected to a reset terminal of a microcomputer. Kobayashi teaches a system adapted to perform a hard power shutdown regardless of the status of the computer:

Under the above circumstances, therefore, it is an object of the present invention to provide a computer having a power forced shutdown function, which can shut down the computer power in a simple structure and without depending on the status of the computer.

(Column 2, lines 20 to 24)

Note that Kobayashi's power switch 46 is connected to the power supply controller 47 to execute a hard shutdown. The power switch 46 is not connected to the CPU 11 or to its reset terminal.

Therefore, Beigel together with Kobayashi does not disclose, teach, or suggest a reset circuit and a power switch of claim 1. A person of ordinary skill in the art would not have found the invention of claim 1 obvious from the cited prior art references.

Because claims 3 and 5 depend directly or indirectly from claim 1, claims 3 and 5 are also not obvious from the cited prior art references. Claims 3 and 5 have been incorporated into claim 12 and canceled.

Claims 6 to 8 also have a similar limitation as claim 1 with regard to a reset circuit and a power switch. Therefore, at least for the same reason as claim 1, claims 6 to 8 are not anticipated by or obvious from the cited prior art references.

Claims 9-11 have been rejected under 35 USC §103(a) as being unpatentable over Beigel in view of Kobayashi and in further view of Patent 5,077,551 to Saitou.

Saitou's invention is directed to "a photosensor unit for detecting the position of the display panel with respect to the main body so as to cut off power supply to the display panel when the display panel is located at the first position, and to allow power supply to the display panel when the display panel is located at the second position." (Abstract)

Similar to Beigel and Kobayashi, Saitou also does not disclose, teach, or suggest a reset circuit and a power switch connected to a reset terminal of a microcomputer.

Because claims 9-11 depend from base claims which have the reset circuit and the power switch features not taught by Beigel, Kobayashi and Saitou, these claims are also not obvious from the cited references. Claim 10 has been rewritten into claim 13.

For the foregoing reasons, all pending claims are believed to be allowable over the cited prior art.

#### New Claims

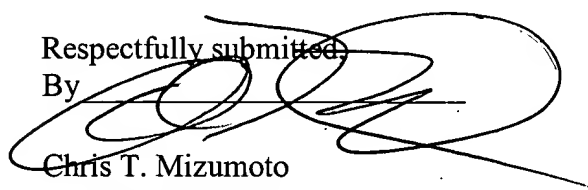
Claim 12 is a combination of claims 1 and 3-5. Therefore, at least for the same reason as claim 1, claim 12 is not anticipated or obvious from the cited prior art references. Claim 13 depends from claim 12, and therefore, it is not anticipated by or obvious from the cited prior art references.

In view of the above amendment, applicant believes the pending application is in condition for allowance.

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Respectfully submitted

By

A large, stylized handwritten signature in black ink, appearing to read 'Chris T. Mizumoto', is written over the 'By' line and extends into the contact information area.

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